



### Appendix A. Radiated Spurious Emission

Test Engineer :	Nick Yu, Derreck Chen, and Ken Wu	Temperature :	23~25°C
		Relative Humidity :	48~51%

**15C 2.4GHz 2400~2483.5MHz  
WIFI 802.11g (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11g CH 11 2462MHz	*	2457.114	106.55	-	-	100.85	32.26	7.83	34.39	100	11	P	H
	*	2457.615	96.06	-	-	90.36	32.26	7.83	34.39	100	11	A	H
		2483.64	71.42	-2.58	74	65.66	32.28	7.91	34.43	100	11	P	H
		2483.52	51.63	-2.37	54	45.87	32.28	7.91	34.43	100	11	A	H
													H
													H
	*	2468.052	99.55	-	-	93.81	32.26	7.91	34.43	176	88	P	V
	*	2469.305	89.28	-	-	83.54	32.26	7.91	34.43	176	88	A	V
		2483.84	64.08	-9.92	74	58.32	32.28	7.91	34.43	176	88	P	V
		2483.52	47.34	-6.66	54	41.58	32.28	7.91	34.43	176	88	A	V
													V
												V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



15C 2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11g CH 11 2462MHz		4926	42.17	-31.83	74	55.29	34.34	11.27	58.73	100	0	P	H
		7386	42.74	-31.26	74	49.8	35.6	15.14	57.8	100	0	A	H
													H
													H
		4926	42	-32	74	55.12	34.34	11.27	58.73	100	0	P	V
		7386	43.51	-30.49	74	50.57	35.6	15.14	57.8	100	0	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



15C Emission below 1GHz  
2.4GHz WIFI 802.11g (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.	
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.		
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )	
2.4GHz 802.11g LF		95.88	30.77	-12.73	43.5	50.37	9.44	2.06	31.1			P	H	
		179.31	34.38	-9.12	43.5	53.72	8.97	2.61	30.92			P	H	
		264.09	32.34	-13.66	46	46.62	13.56	3.16	31			P	H	
		384	36.06	-9.94	46	48.26	15.26	3.52	30.98			P	H	
		563.9	37.07	-8.93	46	43.91	19.89	4.01	30.74	215	39	P	H	
		960.1	30.69	-23.31	54	31.41	24.7	4.94	30.36			P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			39.99	28.36	-11.64	40	43.79	14	1.77	31.2			P	V
			115.32	35.08	-8.42	43.5	52.71	11.13	2.38	31.14			P	V
			264.09	32.52	-13.48	46	46.8	13.56	3.16	31			P	V
			384	34.09	-11.91	46	46.29	15.26	3.52	30.98			P	V
			566	40.09	-5.91	46	47	19.81	4.01	30.73	143	201	P	V
			941.2	27.98	-18.02	46	29.11	24.31	4.94	30.38			P	V
														V
													V	
													V	
													V	
													V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.													



**Note symbol**

*	<b>Fundamental Frequency</b> which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency per 15.209(c).
!	Test result is <b>over limit</b> line.
P/A	<b>Peak</b> or <b>Average</b>
H/V	<b>Horizontal</b> or <b>Vertical</b>



A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

- Level(dBμV/m) =  
Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
- Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

**For Peak Limit @ 2390MHz:**

- Level(dBμV/m)  
= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)  
= 55.45 (dBμV/m)
- Over Limit(dB)  
= Level(dBμV/m) – Limit Line(dBμV/m)  
= 55.45(dBμV/m) – 74(dBμV/m)  
= -18.55(dB)

**For Average Limit @ 2390MHz:**

- Level(dBμV/m)  
= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)  
= 43.54 (dBμV/m)
- Over Limit(dB)  
= Level(dBμV/m) – Limit Line(dBμV/m)  
= 43.54(dBμV/m) – 54(dBμV/m)  
= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.